

**IN THE SPECIFICATION:**

The specification as amended below with replacement paragraphs shows added text with underlining and deleted text with ~~strikethrough~~.

Please REPLACE paragraph [0001] on page 1 with the following amended paragraph:

**[0001]** This application is a continuation of Application No. 10/612,415 filed on July 3, 2003,  
now U.S. Patent No. 7,493,552, and claims the priority benefit of Korean Patent Application Nos.  
2002-38880 filed on July 5, 2002, and 2003-436 filed on July 5, 2002 and January 4, 2003,  
respectively, both in the Korean Intellectual Property Office, the disclosure disclosures of which  
is are incorporated herein by reference in its their entirety, by reference.

Please REPLACE paragraph [0009] on page 2 with the following amended paragraph:

**[0009]** According to an aspect of the present invention, the link information includes  
information ~~on~~ of a mark-up document to be displayed when the set parental level is ~~higher~~ lower  
than the parental level in the meta-information and ~~the information of the~~ a mark-up document to  
be displayed when the set parental level is not ~~higher~~ lower than the parental level in the meta-  
information.

Please REPLACE paragraph [0017] on page 3 with the following amended paragraph:

**[0017]** According to an aspect of the present invention, the display rule information is written  
according to cascading style ~~sheet~~ sheets (CSS) rules.

Please REPLACE paragraph [0021] on pages 3 and 4 with the following amended  
paragraph:

**[0021]** According to another aspect of the present invention, there is provided a data storage medium including AV data, and a mark-up document to reproduce the AV data in an interactive mode and containing a manner in which another mark-up document written in a ~~Script~~script language so as to meet a parental level that has been set in advance.

Please REPLACE paragraph [0025] on page 4 with the following amended paragraph:

**[0025]** According to an aspect of the present invention, the AV data is reproduced in the interactive mode using the mark-up document presenting a warning message indicating that interactive content cannot be displayed when the parental level included in the meta-information is ~~lower~~higher than the set parental level.

Please REPLACE paragraph [0036] on page 6 with the following amended paragraph:

**[0036]** According to another aspect of the present invention, there is provided a method to reproduce AV data in an interactive mode, the method comprising selecting the interactive mode, identifying a parental level set by a user, identifying the parental level written in a mark-up document designated as a start-up document comparing the parental level recorded in the mark-up document with the parental level set by the user, reproducing the AV data in the interactive mode using the mark-up document with a warning message indicating that the interactive content corresponding to the AV data cannot be displayed when the parental level written in the start-up document is ~~less~~higher than the parental level set by the user, and reproducing the AV data in the interactive mode using the mark-up document including the interactive content corresponding to the AV data when the parental level written in the start-up document is not higher than the parental level set by the user.

Please REPLACE paragraph [0046] on page 9 with the following amended paragraph:

**[0046]** From ~~software's~~ a software point of view, the presentation engine 5 in the controller 3 is an engine for interpreting and executing a mark-up language or a client interpretation program language, such as JavaScript or Java. The presentation engine 5 may further include various ~~plugins in~~ plug-ins. Files of various formats included in the mark-up document or linked to the mark-up document can be opened by such ~~plugins in~~ plug-ins. For example, ~~Window~~ Windows Media Player may be called by the presentation engine 5 to reproduce ~~Window~~ Windows Media Player AV data files. In addition, the presentation engine 5 can ~~bring~~ retrieve predetermined data, such as the mark-up documents, from other devices through the network.

Please REPLACE paragraph [0049] on page 10 with the following amended paragraph:

**[0049]** The user may set the parental level at any of 1, 3, 4, 6, and 7. The presentation engine 5 can identify the parental level set for the apparatus 200 to reproduce the data by using ~~"ParentLevel" properties~~ the "ParentalLevel" property of the API.

Please REPLACE paragraphs [0053] and [0054] on pages 10 and 11 with the following amended paragraphs (NOTE TO PRINTER: the underscore "\_" in the term "dvd\_enav" is to be printed in the patent):

**[0053]** The start-up document ~~STARTUP.XML~~ STARTUP.XML contains the parental level information and link information. In an aspect of the present invention, the parental level information is a parental level written in the start-up document STARTUP.XML, and the link information is ~~the mark-up document information~~ indicating whether the parental level set by the user is higher or ~~lower~~ not higher than the parental level written in the start-up document STARTUP.XML. An example of the start-up document STARTUP.XML is as follows.

<STARTUP.XML><STARTUP.XML>

```
<?xml version="1.0"?>
<!DOCTYPE html
PUBLIC "-//DVD//DTD XHTML DVD HTML 1.0//EN"
"http://www.dvdforum/dvdenav/dvdhtml-1-0.dtd">
<html>
<head>
<title>Startup Page</title>
<meta name="ParentalLevel" contents="4" />
<link rel="FirstPage" href="dvd://dvd_enav/index.xml" />
<link rel="Warning" href="dvd://dvd_enav/warning.xml" />
</head>
</html>
```

**[0054]** The start-up document STARTUP.XML contains meta-information <meta name="ParentalLevel" contents="4" /> concerning the parental level and the link information <link rel="FirstPage" href="dvd://dvd\_enav/index.xml" /> <link rel="Warning" href="dvd://dvd\_enav/warning.xml" />. According to the meta-information and the link information, WARNING.XML is displayed on the screen when the parental level set for the apparatus 200 to reproduce the data is not higher than 4, or below, and INDEX.XML is displayed on the screen when the parental level exceeds set for the apparatus 200 to reproduce the data is higher than 4.

Please REPLACE paragraph [0058] on page 12 with the following amended paragraph (NOTE TO PRINTER: the underscore "\_" in the term "dvd\_enav" is to be printed in the patent):

**[0058]** In the start-up document STARTUP.XML, link information is stored. In an aspect according to the present invention, the link information includes mark-up document information indicating corresponding to the parental level set by the user for the apparatus 200 to reproduce the data. An example of the start-up document STARTUP.XML is as follows.

<STARTUP.XML><STARTUP.XML>

```

<?xml version="1.0"?>
<!DOCTYPE html
PUBLIC "-//DVD//DTD XHTML DVD HTML 1.0//EN"
"http://www.dvdforum/dvdenav/dvdhtml-1-0.dtd">
<html>
<head>
<title>Startup Page</title>
<link rel="1" href="dvd://dvd_enav/G/index.xml" />
<link rel="3" href="dvd://dvd_enav/PG/index.xml" />
<link rel="4" href="dvd://dvd_enav/PG13/index.xml" />
<link rel="6" href="dvd://dvd_enav/R/index.xml" />
<link rel="7" href="dvd://dvd_enav/NC-[13]17/index.xml" />
<link rel="7" href="dvd://dvd_enav/NC-17/index.xml" />
</head>
</html>

```

Please REPLACE paragraphs [0060] and [0061] on pages 12 and 13 with the following amended paragraphs (NOTE TO PRINTER: the underscore "\_" in the term "dvd\_enav" is to be printed in the patent):

**[0060]** The presentation engine 5 identifies the parental level set for the apparatus 200 to reproduce the data using an API that has been described above and interprets the mark-up documents using the meta-information and the link information written in the mark-up document designated as a start-up document.

**[0061]** Alternatively, in a case where there are two or more start-up pages provided for each parental level, the start-up pages for the different parental levels can be stored in the same directory but have different file names. In this case, the start-up document STARTUP.XML may have the following format and structure.

<STARTUP.XML><STARTUP.XML>

```
<?xml version="1.0"?>
<!DOCTYPE htmlPUBLIC "-//DVD//DTD XHTML DVD HTML 1.0//EN"
"http://www.dvdforum/dvdenav/dvdhtml-1-0.dtd">
<html>
<head>
<title>Startup Page</title>
<link rel="1" href="dvd://dvd_enav/index_g.xml" />
<link rel="3" href="dvd://dvd_enav/index_pg.xml" />
<link rel="4" href="dvd://dvd_enav/index_pg13.xml" />
<link rel="6" href="dvd://dvd_enav/index_r.xml" />
<link rel="7" href="dvd://dvd_enav/index_nc_13_17.xml" />
<link rel="7" href="dvd://dvd_enav/index_nc_17.xml" />
</head>
</html>
```

Please REPLACE paragraph [0063] on page 13 with the following amended paragraph (NOTE TO PRINTER: the underscore "\_" in the term "DVD\_ENAV" is to be printed in the patent):

**[0063]** In the interactive directory DVD\_ENAV, the mark-up document INDEX.XML is stored. In addition, a cascading style sheet ~~sheet~~ sheets (CSS) file indicating the mark-up document INDEX.XML corresponding to the parental level set for the apparatus 200 to reproduce the data is also stored in the interactive directory DVD\_ENAV. The CSS file may be included in the mark-up document rather than ~~to be generated~~ being provided separately from the mark-up document.

Please REPLACE paragraphs [0070] and [0071] on pages 16-18 with the following amended paragraphs (NOTE TO PRINTER: the underscore "\_" in the term "dvd\_enav" is to be printed in the patent):

**[0070]** An example of the mark-up document INDEX.XML and its display rule information, which is provided as an individual single file following CSS standards, i.e., as a file INDEX.CSS, is as follows.

<INDEX.XML>

```
<?xml version="1.0"?>
<!DOCTYPE html
PUBLIC "-//DVD//DTD XHTML DVD HTML 1.0//EN"
"http://www.dvdforum/dvdenav/dvdhtml-1-0.dtd">
<html>
<head>
<title>Example</title>
<link rel="stylesheet" type="text/css" href="index.css">
</head>
<body>

<div class="7">.....</div>

<div class="3">.....</div>
...
</body>
</html>
```

## &lt;INDEX.CSS&gt;

```
@parentalLevel-display G
{
.3 {display:box; visibility:hidden;}
.4 {display:box; visibility:hidden;}
.6 {display:box; visibility:hidden;}
.7 {display:box; visibility:hidden;}
}
@parentalLevel-display PG
{
.4 {display:box; visibility:hidden;}
.6 {display:box; visibility:hidden;}
.7 {display:box; visibility:hidden;}
}
@parentalLevel-display PG13
{
.6 {display:box; visibility:hidden;}
.7 {display:box; visibility:hidden;}
}
@parentalLevel-display R
{
.7 {display:box; visibility:hidden;}
}
@parentalLevel-display NC-17
{
}
```

**[0071]** Alternatively, the mark-up document INDEX.XML may be written using a script language, such as JavaScript, so as to represent a document appropriate for the corresponding parental level. The script language, which is a programming language, may be used in various manners. An example of the mark-up document INDEX.XML using the script language is as follows.



<INDEX.XML><INDEX.XML>

```

<?xml version="1.0"?>
<!DOCTYPE html
PUBLIC "-//DVD//DTD XHTML DVD HTML 1.0//EN"
"http://www.dvdforum/dvdenav/dvdhtml-1-0.dtd">
<html>
<head>
<title>Example</title>
<script type="text/Javascript">
if(InteractivDVD.ParentalLevel == 1)
{classes.3.display="box";
classes.3.visibility="hidden";
classes.4.display="box";
classes.4.visibility="hidden";
classes.6.display="box";
classes.6.visibility="hidden";
classes.7.display="box";
classes.7.visibility="hidden";}
if(InteractivDVD.ParentalLevel == 3)
{classes.4.display="box";
classes.4.visibility="hidden";
classes.6.display="box";
classes.6.visibility="hidden";
classes.7.display="box";
classes.7.visibility="hidden";}
if(InteractivDVD.ParentalLevel == 4)
{classes.6.display="box";
classes.6.visibility="hidden";
classes.7.display="box";
classes.7.visibility="hidden";}
if(InteractivDVD.ParentalLevel == 4)
{classes.6.display="box";
classes.6.visibility="hidden";
classes.7.display="box";
classes.7.visibility="hidden";}
if(InteractivDVD.ParentalLevel == 6)
{classes.7.display="box";
classes.7.visibility="hidden";}
if(InteractivDVD.ParentalLevel == 7)
{
</script>
</head>
<body>

<div class="7">.....</div>

<div class="3">.....</div>
...
</body>
</html>

```

Please REPLACE paragraph [0076] on page 19 with the following amended paragraph:

**[0076]** More specifically, at operation 602, the apparatus 200 to reproduce the data identifies the parental level written in the mark-up document designated as the start-up document and compares the parental level recorded in the mark-up document with the parental level identified at operation 601. If the parental level written in the start-up document is not higher-lower than the parental level identified at operation 601, the AV data is reproduced in the interactive mode using the mark-up document with a warning message indicating that the interactive content corresponding to the AV data cannot be displayed. On the other hand, if the parental level written in the start-up document is higher-lower than the parental level identified at operation 601, the AV data is reproduced in the interactive mode using the mark-up document containing the interactive content corresponding to the AV data.

Please REPLACE paragraph [0078] on page 20 with the following amended paragraph:

**[0078]** As described above, apparatus 200 may obtain predetermined data, for example, the mark-up document, ~~from the~~ from a network, such as the Internet. Accordingly, it is understood that where the user set parental level identified at operation 601 is equal to or higher than a level of an attribute corresponding to a list of URL(s) for web servers, the AV data is reproduced in the interactive mode and the URL(s) specified by the attribute are allowed to be accessed.

Please REPLACE paragraph [0082] on page 20 with the following amended paragraph:

**[0082]** FIG. 9 is a flowchart of the method to reproduce the AV data in the interactive mode using the mark-up document, according to an aspect of the present invention. Referring to FIG. 9, at operation 901, the apparatus 200 to reproduce the data identifies the parental level set by the user. Thereafter, the apparatus 200 to reproduce the data identifies the class value allotted to the predetermined element of the mark-up document at operation 902. At operation 903, the

apparatus 200 to reproduce the data determines whether to display the predetermined element based upon the parental level identified at operation 901 and the class value and with reference to ~~the display [the] rule information~~ at operation 903. The apparatus 200 to reproduce the data embeds the AV screen obtained by reproducing the AV data in the mark-up screen and displays a result of the embedment at operation 904.